REMARKS

In this Amendment, claims 25, 31, 33, 34, 35, 36, 37, 38, 44, 45, 46 and 47, have been rewritten or amended to overcome the objections and rejections of the 09/05/2003 office action.

Applicants respectfully request the withdrawal of the 35 U.S.C. § 112, rejection of claim 46.

Applicants respectfully request the withdrawal of the 35 U.S.C. § 103(a). Amended claim 46 depends on claim 22 which concerns a new and non-obvious "*means for preventing post-surgical adhesions*". Thus, the non-obviousness of amended claim 46 process results from the one of claim 22 means.

Respectfully submitted,

Alain CONSTANCIS et al

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Date

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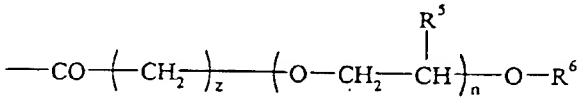
crosslinking which can be controlled by adjusting the degree of substitution of the carboxylic units of the aspartic and glutamic acid residues of the collagenic chains. There is thus a certain margin for maneuver for choosing the mechanical quality of the materials suitable for the intended application.

The disulfide bridges of these crosslinked collagenic peptides C may be reduced using suitable reducing agents, examples of which have been given above.

According to a variant of the invention, the collagenic peptide A, the crosslinkable collagenic peptide B and/or the at least partly crosslinked collagenic peptide C, which is a constituent of the means claimed, also carries grafts G attached to at least some of the free amine units of the collagenic chain, via amide bonds, G being an acyl comprising a hydrocarbon-based entity, EXCLUDING mercaptoamino residues, in particular those as defined above, optionally containing hetero atoms (advantageously O and/or N), preferably chosen from alkyls and/or alkenyls and/or alicyclics and/or aromatics, and even more preferably from the groups comprising an alkyl chain, optionally unsaturated and comprising from 1 to 22 carbon atoms or corresponding to the following formula (III):

(III) 

with:

- R^5 = H or CH_3;
- R^6 = H, or a linear or branched alkyl radical, and preferably a methyl;
- z = 0, 1 or 2 and n > 0.

This additional functionalization on the amine sites of the lysines may confer on the modified collagenic peptides a further capacity for crosslinking or alternatively a hydrophilic or hydrophobic, or even a surfactant~~, nature~~ nature. It is also conceivable for this functionalization to have therapeutic purposes via the anchoring of an active principle, which may be, for example, in the application concerned, one or more chemical agents for anti-adhesion treatment.

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According to a variant of the invention, the collagenic peptide A, the crosslinkable collage peptide B and/or the at least partly crosslinked collagenic peptide C, which is a constituent the means claimed, also carries grafts G attached to at least some of the free amine units of the collagenic chain, via amide bonds, G being an acyl comprising a hydrocarbon-based entity, EXCLUDING mercaptoamino residues, in particular those as defined above, optionally containing hetero atoms (advantageously O and/or N), preferably chosen from alkyls and/or alkenyls and/or alicyclics and/or aromatics, and even more preferably from the groups comprising an alkyl chain, optionally unsaturated and comprising from 1 to 22 carbon atoms or corresponding to the following formula (III):

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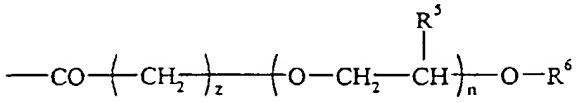
(III) 

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ABSTRACT

The aim of the invention is to provide a modified collagen peptide for preventing post-operative adhesions that is non-toxic, economic, in addition to being easy to obtain, sterilise, manipulate and implement, having controlled biodegradability and presenting a sufficiently strong initial mechanical resistance in situ (cohesion). This is achieved in the case of that modified collagen peptide for preventing post-operative adhesions according to the invention which is characterized in that it comprises at least one collagen peptide that is modified by grafting thiol functions that are free or substituted, cross-linkable and/or at least partly cross-linked, whereby the thiol functions are provided by mercaptoamine radicals that are exclusively grafted on the aspartic and glutamic acids of the collagen chains by means of amide bonds. The modified collagen peptide can exist in the form of a homogeneous or composite film, as a gel or in as a liquid which can be applied and cross-linked per se as on in vivo tissue.